

2008 RESEARCH UPDATE #2

The article “Complementary Therapy and Cardiac Surgery,” by Jerry Whitworth, RN, Anna Burkhardt, MA, OTR/L, and Mehmet Oz, MD, was recently brought to our attention by Todd Masluk, PhD, a researcher associated with TMI. It was published in the *Journal of Cardiovascular Nursing*, vol. 12, no. 4 (July 1998), pp. 87–94. It provides an overview of mind-body techniques and complementary care resources then in use at Columbia-Presbyterian Medical Center in New York City. In the section of the paper headed “Audiotapes,” the authors hypothesize that—given existing evidence for subconscious awareness under anesthesia—audiotapes could “positively influence perception of the surgical experience and recovery during the postsurgical healing phase.” The method of introducing audiotapes and the several varieties of tapes offered by Columbia Presbyterian’s Complementary Care Center is described. The authors then discuss the development and the nature of Hemi-Sync® and detail the application of the five audiotapes in TMI’s *SURGICAL SUPPORT SERIES* and how they are used in preparation for surgery, during surgery, and during recovery. The authors note that the verbal guidance on the two final tapes may attract the patient’s attention, thus assisting in centering and remaining relaxed during recovery.

An abstract of the preliminary results of an ongoing study titled “The Effect of Hemi-Sync Music on Intraoperative Stress Reduction in Patients Having Awake-Surgery for Parkinson’s Disease or Dystonia” was published in the *Journal of Neurosurgical Anesthesiology*, vol. 18, no. 4 (October 2006), pp. 330–31. Researchers Irene P. Osborn, MD, and M. M. Liao, MD, of the Department of Anesthesiology, Mount Sinai School of Medicine, New York City, undertook the study to determine if providing Hemi-Sync with music to patients undergoing deep brain stimulation (DBS) surgery reduces intraoperative anxiety. Data collected on seventeen patients indicated that most of those in the Hemi-Sync group had a lower score on the State-Trait Anxiety Inventory (STAI), which measures a subject’s anxiety level. They also exhibited lower blood pressure and a reduction in the bispectral index (BIS), an EEG measure monitoring perioperative consciousness. The study will continue until thirty patients have been evaluated.

“Effects of Binaural-Beat Stimulation on Recovery Following Traumatic Brain Injury: A Pilot Study,” by Signe Klepp, OT, was reprinted in vol. 17, no. 2 (September 2007), pp. 181–190, of *Subtle Energies & Energy Medicine*, the journal of the International Society for the Study of Subtle Energies and Energy Medicine (ISSSEEM). The study assesses the effectiveness of binaural-beat stimulation in improving functioning and life quality for patients suffering from brain trauma received years earlier. Based on positive changes that she observed, the author concluded that “More studies with binaural auditory beats should be done in patients with old traumatic brain injury (TBI) and perhaps also in the post-acute recovery [stage] after TBI.” This paper was originally published in the *Hemi-Sync Journal*, vol. 23, nos. 3 & 4 (Summer/Fall 2005).